

----- CPU NEWSWIRE ONLINE MAGAZINE -----
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> Issue: CPU # 402; 01/12/90 The Original 16/32 bit Online Magazine!

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CPU/STR's support BBS, NODE # 350 invites systems using Forem ST BBS to participate in Forem BBS's F-Net mail network. Or, Please call # 350 direct at 904-786-4176, and enjoy the excitement of exchanging ideas about the Atari ST computers through an excellent International ST Mail Network.

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> The Editor's Podium ¢

It seems that teamwork is the catch-phrase these days as far as our offerings to our readers are presented.... by not only us, but others. For this situation we are, extremely grateful to our competition, for making sure as many readers as possible obtain the latest news and information we present 'first' at 6pm on fridays.... <grin>

Moving right along, folks, we are on our way into the first quarter of 1990 and most of us anxiously await the re-appearance of Atari as a leader in the US market place. Where are the Ads? Well, we are told that the ad campaign is underway. However, it is focused on the Portfolio and the Lynx. That's all well and good but what about us? the Loyal diehards who have been here from day one? Rumor has it that the actual push in the States is set to begin sometime during next month, February.

Thanks once again for your continued strong support!!

Ralph.....

:HOW TO GET YOUR OWN GENIE ACCOUNT:

To sign up for GENie service: Call: (with modem) 800-638-8369.

Upon connection type HHH (RETURN after that).
Wait for the U#= prompt.

-> Type: XTX99587,CPUREPT then hit RETURN <-

**** SIGN UP FEE WAIVED ****

The system will now prompt you for your information.

THE GENIE ATARI ST ROUNDTABLE - AN OVERVIEW

The Roundtable is an area of GENie specifically set aside for owners and users of Atari ST computers, although all are welcome to participate.

There are three main sections to the Roundtable: the Bulletin Board, the Software Library and the Real Time Conference area.

The Bulletin Board contains messages from Roundtable members on a variety of Topics, organized under several Categories. These messages are all Open and available for all to read (GENie Mail should be used for private messages).

If you have a question, comment, hot rumor or an answer to someone else's question, the Bulletin Board is the place to share it.

The Software Library is where we keep the Public Domain software files that are available to all Roundtable members. You can 'download' any of these files to your own computer system by using a Terminal Program which uses the 'XMODEM' file-transfer method. You can also share your favorite Public Domain programs and files with other Roundtable members by 'uploading' them to the Software Library. Uploading on GENIE is FREE, so you are encouraged to participate and help your Roundtable grow.

The Real Time Conference is an area where two or more Roundtable members may get together and 'talk' in 'real-time'. You can participate in organized conferences with special guests, drop in on our weekly Open Conference, or simply join in on an impromptu chat session. Unlike posting messages or Mail for other members to read at some later time, everyone in the Conference area can see what you type immediately, and can respond to you right away, in an 'electronic conversation'.

> CPU REPORTâ €
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Issue # 49

by Michael Arthur

Remember When....

In the 1950s, scientists performed researched into a new type of computer program called "self-altering automata", and when in the 1970s, Xerox's Palo Alto Research Labs demonstrated a self-replicating utility which they envisioned to be usable in many system applications, such as tracing problems in LAN Networks, or when science fiction novels exploring the implications of this "automata" called this type of program a virus?

CPU Systems Roundupâ € XX
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Apollo, and the Tale of the Low-End 68030 Unix Workstations

When Atari first revealed that it was making a 68030-based Unix workstation, much interest was turned towards how a reasonably powerful Unix-compatible low-end workstation would do in the growing 'Personal Workstation' segment of the computer industry. However, Apollo has reopened this debate by introducing the Apollo 2500, a \$4000.00 68030 Unix workstation which appears to be poised at taking over the low/middle end of the Unix computer industry. Since this is the same niche that the 68030 TT was intended for, let us both take a look at the Apollo 2500, and compare it to the 68030 TT, in order to gain a more objective perspective of this growing situation:

The Apollo 2500 uses a 20 MHZ version of Motorola's 68030 chip, and

a 20 MHZ 68882 Floating Point Math Chip. It has 4 Megabytes of RAM onboard, and comes with a 1024*768 monochrome resolution. It also has 1 IBM AT Expansion Slot (which requires device drivers to use IBM AT Cards with it), 1 SCSI hard disk port, and 1 Ethernet Port for interfacing with Local Area Networks.

It currently uses Aegis, Apollo's proprietary workstation operating system, but can run AT&T Unix System V.3. It also has Open Dialogue, Apollo's Graphical User Interface (GUI) for Unix. One of the key features of Apollo's operating system set is Domain/OS, or the Network Computing System (NCS). This networking software provides many of the tools needed for efficient workstation use of a LAN Network, such as allowing processes (or tasks) within a program to utilize data, disks, and other resources of another computer hooked up to the LAN. However, Apollo's Domain Network Computing System advances this concept by allowing programs and processes to utilize CPU processing time which is not being used by another program on a LAN Network. Resulting in a system which can perform distributed processing via software....

However, this all may change: Apollo is one of the charter members of the Open Software Foundation (OSF), a group of several major Unix Vendors developing OSF/1, a standard operating system based on Unix and IEEE Posix standards. While the OSF has said it will consider supporting Domain NCS in OSF/1, it seems that they may use the distributed processing options in A/IX, IBM's implementation of Unix. Since the OSF is also reportedly considering the use of Mach, the Unix OS that the NeXT Computer uses, then Apollo may soon lose the advantages of its own Domain/OS....

Graphic comparison of the features of the 68030 TT and Apollo 2500:

Atari TT/Apollo 2500 Features List:
(Comparison of each Systems' Features)

System Features and Components	Atari TT030/6 Cost: \$4000.00	Apollo 2500 Base System: \$4000.00
Processing Features	16 MHZ Motorola 68030 chip 16 MHZ 68882 Math Chip	20 MHZ Motorola 68030 chip 20 MHZ Motorola 68882 chip
Megabytes of Standard RAM	4 Megabytes of 32-Bit RAM, and 2 Megs of Burst-Mode RAM	4 Megs of 32-Bit RAM
Description of Operating Features	AT&T Unix System V.4, with the X/Windows V11 Unix windowing system, and the X/Desktop GUI	AT&T Unix System V.3, Open Dialogue GUI, and Domain Network Computing System
Type of Bus Architecture	32-Bit VME Bus Architecture with Six Expansion Slots	1 Expansion Slot for Hard Disk Controller
Graphic Display Resolutions and Capabilities	# of Displayable Colors 1280*960 in Monochrome 640*480 w/16 Colors 320*480 w/256 Colors The TT supports the ST's resolutions, and has a 12-Bit per Pixel (4096 Color) Palette	# of Displayable Colors 1024*768 in Monochrome The Apollo 2500 does not support a Color Palette
Standard Amount	40 Megabyte Internal	100 Meg Hard Drive

of Mass Storage	Hard Drive	As an Additional Option
Built in I/O Ports	Atari ST Ports, and [1] SCSI [1] DMA [1] Ethernet Port	[1] SCSI [1] Ethernet LAN Port
Sound/Audio Capabilities	Uses Amy Sound Chip for Eight Stereo Sound Channels (Voices)	Unknown at this time
Networking Capabilities	Sun Network File System (NFS), and Ethernet Port	Domain NCS for Distributed multiprocessing over LANs

Based on both this graph, and last week's System Descriptions, I have made a comparative analysis of both systems, and made these standings, which are classified according to the above topics:

Processing Speed:

First Place - Apollo 2500. Since both workstations use the Motorola 68030 chip, and have a 68882 Floating Point Math chip, the criteria for determining overall system performance is determined largely by the computers' architectures, various coprocessors, and main CPU speed. While the 68030 TT excels technically in terms of its overall architecture, it just can't beat the increased MHZ speed of the Apollo 2500....

Atari TT030/6 Comparison:

The Atari 68030 TT has Burst-mode RAM which can function as Dual Ported Video RAM, has a Blitter chip for graphics coprocessing, and uses the VME Architecture. But while all of these things help increase its overall processing speed, the plain facts are that the TT has a 16 MHZ 68030, and the Apollo 2500 has a 20 MHZ 68030 chip.

This means that, while the TT may approach or even equal the Apollo 2500 in processing speeds, and while one SHOULD be able to place a 20 MHZ 68030 into a TT, the Apollo 2500 starts out with a faster chip. But the most important factor here is image. While the 68030 TT may be FASTER than the Apollo 2500, people will perceive the Apollo as being faster simply because of its higher MHZ rate....

Operating System Features:

First Place - 68030 TT. While both the 68030 TT and Apollo 2500 run Unix, the Apollo 2500 doesn't come with X/Windows, the standard Unix windowing system. This means that while many applications may run on the 2500, the many Unix programs which use X/Windows will not. And since the 68030 TT gives X/Windows a graphical user interface called X/Desktop, which resembles GEM in its "look and feel"....

Atari TT030/6 Comparison:

Along with running normal ST programs, the 68030 TT will be able to run Unix. Atari has gotten the same company who made A/UX, Apple's version of Unix for the Macintosh, to port AT&T Unix Version 5.4 (the newest version) to the 68030 TT. Among other things, this has Sun's Network File System, for file sharing among computers on a LAN. Atari has also gotten Ixi Ltd. to port X/Desktop, a GEM-like Graphical User Interface (GUI) running under X/Windows, to the TT. This means that the TT has the power of Unix, combined with a Unix GUI to make it easier to use. Furthermore, while X/Windows is a windowing standard in itself,

X/Desktop is also supported by several Unix software products, meaning that if Atari R&D works with Unix software companies, that the 68030 TT will have no lack of GUI-capable Unix software....

Apollo 2500 Comparison:

The Apollo 2500 uses a version of AT&T Unix Version 5.3, but can also run Aegis, Apollo's proprietary OS. It uses Apollo's own Open Dialogue GUI for Unix. However, the best trait of Apollo's OS package is its Domain NCS (Network Computing System). NCS allows CPU tasks and programs to utilize system resources, including CPU Processing time, from ANY workstation in a LAN Network. This means that, for example, a spreadsheet program running on computer A could recalculate a spreadsheet by using computer B, if both computers were connected via a LAN Network.

However, Apollo is also a member of the Open Software Foundation, as is its parent company, Hewlett-Packard. This means that Apollo products (including the 2500) will run under OSF/1, the Unix OS being designed by the OSF, when it is introduced. But interestingly enough, the OSF has indicated that it may not include Domain NCS into OSF/1, meaning that the Apollo 2500's advantage with Domain NCS may only be temporary....

Expandability:

First Place - Atari 68030 TT. It uses the VME Expansion Bus, which is not only used in Sun Workstations, but has been a standard for years. As a result, there are hundreds of VME cards out on the market. In comparison, the Apollo 2500 does not have any open expansion slots....

Atari TT030/6 Comparison:

The 68030 TT uses a full 32-bit version of the VME Expansion Bus, which was developed by Motorola and others. Besides being optimized for the Motorola 680x0 series of processors, the VME bus has been in use since the early 1980's, and as such, has a vast number of VME boards available for it. Ironically, though, while most VME cards will be able to work with the 68030 TT without modification, many boards which handle specific operations (such as 24-bit graphics cards, or coprocessor boards) will need to have device drivers written in order to work with the TT.

Meaning that the 68030 TT's expandability in this area depends on Atari actively lobbying and working with the makers of VME Boards so they can leap to the support of Atari's Unix Workstation Line. While this may have seemed like Science Fiction only a few months back, Atari's recent improvements in Developer Support, coupled with Charles Cherry's wise efforts, may make this scenario more realistic....

I/O Ports/Networking:

First Place - Atari 68030 TT. While the Apollo 2500 only has support for an Ethernet or IBM Token Ring LAN Port, the 68030 TT provides all of the necessary I/O ports (such as SCSI, RS-232, and Ethernet ports) which would make it desirable in the low-end workstation market. In terms of software support for computer networking, the 68030 TT will support Sun's Network File System (NFS), which is a Unix standard for accessing files and resources over a LAN Network. However, Apollo's Domain NCS networking system is more powerful than NFS, and while it may not be as widely supported, does give the Apollo 2500 added functionality. But in terms of

overall performance, the 68030 TT outshines the Apollo 2500 in this area.

Market Outlook for the Apollo 2500 and 68030 TT

Apollo 2500 Outlook:

Given its performance against the 68030 TT, one might expect the outlook for the Apollo 2500 to be grim. But contrary to the opinions of a few, the Apollo 2500 should do very well in the Unix workstation industry, simply because of the market which it was targeted at. The Apollo 2500 has NO disk drive and no expansion slots, it does have a lot of memory capacity, good processing speed, and a usable high resolution monitor.

While the above may not be a good recipe for a microcomputer, it is practically ideal for a low-end Unix terminal. Large businesses who have bought high-end microcomputers or workstations often need to interconnect their business through a LAN Network, but cannot afford the cost to buy similarly powered computers for their entire business. With the Apollo 2500, these businesses will be able to buy an efficient low-end Terminal which will both function well as a Node in a LAN Network, and cost comparatively little money. And while this market may seem mundane, it seems that this may be the largest untapped market in the workstation industry. And good niches are very hard to find....

68030 TT Outlook:

Since the 68030 TT runs TOS, has many improvements over its predecessor (including VGA-style graphics), and has an industry-standard expansion bus, the TT seems a fitting upgrade to the Atari ST. Being in the \$2500 to \$5000.00 price range, the 68030 TT is obviously aimed at the middle to high end of the market, and is intended for the ST User who wants to upgrade to a more powerful system. Given all this, the 68030 TT seems destined to become the ST's successor.

But since it is in the same price range as the Mega ST's, is aimed at the same market, and uses an industry standard bus (while Atari shunned the Mega ST's expansion bus to the effect that there are VERY few boards out for it), the 68030 TT makes the Mega ST obsolete. And since Atari will probably not support any good policy allowing ST owners to trade-in their Megas and upgrade to the 68030 TT for a price, the TT will be a harbinger of tough luck for present Mega ST owners....

The TT030/6 is directly poised at the new 'Personal Workstation' market, which promises to grow into a billion-dollar industry in the next few years. It meets all the requirements for a workstation, as it has AT&T Unix, compatibility with standard LAN Networking Systems, and graphics which, though not spectacular, would be a desired asset for many low-end workstations. Given that low-end Unix workstations aren't currently targeting its niche, the TT030/6 has a great shot at propelling Atari into the middle/high end of the microcomputer market. The TT030/6 will be especially popular in Europe, where there is a massive need for good Unix workstations, and where Atari has enough clout to make the TT a standard in the business market.

However, the 68030 TT may not be so lucky in the US, where most people who need Unix would now, given the choice of the Atari TT030/6, probably choose to pay more for a Sun or IBM that is less powerful, because companies in those markets have two dominating advantages:

1) Companies like Sun and Apollo are more recognized for quality products in that market, and their capability to SUPPORT that market. We all know Atari makes good computers, but the potential for ENORMOUS revenue that Atari could make off the 68030 TT will be seriously jeopardized if plans aren't established for a Sales Force which would lobby these companies for sales. Sun and Apollo have built their businesses on having Regional Sales and Support Teams which would be best suited for selling workstations in their district, and supporting their customers so they will come back in the future.

One way that Atari could quickly establish such a sales force is to build relationships with currently available options. For example, if Atari were to get Computerland or Businessland to sell TT030/6's, not only would Atari have a TREMENDOUS sales tool for their computer, but the technical support resources needed to endear businesses to Atari would come with the package. Also, the Public Relations bonanza that would result from Atari getting someone like Computerland to sell their computers would be priceless (and free) advertising for the ST line....

2) Sun and Apollo have "name/product recognition". This means that the names "Sun Microsystems" and "Apollo" are synonymous with powerful workstations with great abilities. IBM and Apple also have "name/product recognition" in the microcomputer market. Apple gained its renown fairly recently, and now it is making \$5.3 Billion Dollars a year. Commodore is trying to give the Amiga "name/product recognition", so they can also become more prosperous.

Given that Atari's computers often provide more price/performance than any of the aforementioned companies, it would be tragic if Atari were not to give the Atari ST and TT "name/product recognition" via new strategic marketing plans. In fact, often having good "name/product recognition" in the desired marketplace can make a computer company a lot of money, and since the Tramiels generally like to make more money....

But ponder, if you will, these questions:

- 1) Given the 68030 TT and ATW's advanced features, what is the possibility of the main users of Unix workstations (mainly large universities, Research Labs, and corporations) not readily accepting the 68030 TT or the ATW in the US until the Atari ST's current status in the US computer market improves to a certain extent?
- 2) Apple dealers are reporting that the sales of the Mac IICx alone (Cost: \$5000.00) outnumber their combined sales of the Mac Plus and Mac SE. How does this situation apply to the 68030 TT, which is aimed at the same market as the Mac IICx?

Redmond, WA

Microsoft has released a ROM-based version of MS-DOS version 3.3. Now licensed by several portable PC makers, including Poget Computer for its \$2000.00 handheld PC, this ROM can save up to 40K of RAM over the disk-based DOS. Given that Digital Research's DR-DOS operating system (which clones MSDOS), released several months ago, can also be executed from ROM chips....

Cambridge, MA

The Open Software Foundation, a consortium of major Unix vendors developing a new Unix standard, has announced that OSF/1, the first release of its new operating system, will be available by July 1990. It recently released OSF/Motif, the Unix Graphical User Interface standard which it developed, on schedule, so so OSF/1, like the EISA Expansion Bus, may not become vaporware, as has been speculated....

Bristol, England

Following SGS Thompson's purchase of Inmos, and its drastically cutting prices on its Transputer line of microchips, Inmos Ltd. has announced that it is developing a new version of the Transputer, which will be MUCH faster at vector and integer operations, have a built in 8-32K Static RAM cache, and include a built-in hardware memory management chip. However, this chip is expected to be introduced by 1991...

> GENie Survey Results CPU/STR FOCUSâ € Saying it with a smile.....
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GENie Atari ST Customer Survey
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December 1989 - January 1990

This survey was designed to give GENie a measurement of how well we stack up to our main competitor, CompuServe. More than 700 people took the time to reply, with hundreds of them sending messages of followup to go into more detail on the answers.

Before we start off with the results, I'd like to thank all of you for

helping us out on this. All replies were useful and will help us steer the development of GENie and the ST area.

1. What computer(s) do you have?

A. Atari 520ST (no upgra	77	11%
B. Atari 520ST with extr	212	30%
C. Atari 1040ST	320	45%
D. Atari Mega 2 or 4	185	26%
E. Atari 8-bit	164	23%
F. Atari Portfolio	20	03%
G. IBM PC or clone	84	12%
H. Apple Macintosh	21	03%
I. Commodore 64 or 128	18	03%
J. Commodore Amiga	14	02%
K. Other	37	05%

Response: 711 out of 712 total visitors

Almost half the people have 1040ST computers. Very few have unexpanded 520 ST's, with a surprisingly large number of Mega 2 and 4's. Overall, GENie users have more sophisticated systems than the typical user. And most of you have several computers as well -- the average is 1.6 computers per person.

2. Which kinds of files do you like to download?

A. Demo Programs	272	38%
B. DeskTop Publishing	265	37%
C. Games	367	52%
D. Music or Digitized So	169	24%
E. Online Magazines (ST	353	50%
F. Pictures or Animation	278	39%
G. Practical Application	482	68%
H. Press Releases	155	22%
I. Programming Tools	275	39%
J. Programs for kids	129	18%
K. Support files for sof	428	60%
L. Utilities or Desk Acc	597	84%

Response: 707 out of 712 total visitors

There was a clear winner here -- Utilities and Desk accessories are downloaded by a whopping 84% of the respondents. Practical applications and files supporting software you own are also very popular. Only kids programs fared poorly in the survey, although download counts on those kinds of files are still fairly strong. Those of us who have kids get them, but lots of you must not.

3. What is your typical monthly GENie bill?

A. Less than \$5	18 03%
B. \$5-10	72 10%
C. \$10-15	110 15%
D. \$15-20	104 15%
E. \$20-30	156 22%
F. \$30-50	128 18%
G. \$50-75	62 09%
H. \$75-100	20 03%
I. over \$100	29 04%

Response: 699 out of 712 total visitors

The typical bills seem to be higher than average. You must like us! Almost half the responses are under \$20 per month, though, which is pretty normal.

4. If the Atari ST RoundTable could be offered to you at a flat monthly price, what's the highest amount you think would be reasonable?

A. \$5 month	51 07%
B. \$10	116 16%
C. \$15	83 12%
D. \$20	94 13%
E. \$25	104 15%
F. \$30	51 07%
G. \$40	27 04%
H. \$50	31 04%
I. Would pay by the hour	136 19%

despite the availability of a flat monthly price.

Response: 693 out of 712 total visitors

This question made a lot of people nervous. I can't go into all the reasons why we asked it, but we did learn a lot from it. More than half the responses came in at \$15 per month or less (including those who would not accept a flat rate). The bottom line here is a flat rate only works if it saves you money, and not just a few of you. There is no plan at this time to charge a flat rate for access to the RT, especially if it would penalize light users.

5. Do you also have an account on CompuServe?
- | | |
|--------------------------|---------|
| A. Yes, and have used it | 229 32% |
| B. Yes, but have not use | 186 26% |
| C. No | 295 41% |

Response: 710 out of 712 total visitors

A majority of you also have CompuServe accounts, but less than a third of you have active accounts. Thanks! ;-)

6. If you also have a CompuServe account, which system do you like better, GENie or CompuServe?
- | | | |
|---------------|-----|-----|
| A. GENie | 444 | 62% |
| B. CompuServe | 42 | 06% |

Response: 486 out of 712 total visitors

Wow! By more than a 10:1 margin, GENie is preferred. We were ecstatic with this answer and with many of the very kind comments you sent us by email after the survey. We'll try to do even better as time goes by.

7. If you have a preferred system, what features make you like it better?
- | | | |
|--------------------------|-----|-----|
| A. Atari Corp. and devel | 262 | 37% |
| B. Bulletin board | 210 | 29% |
| C. Local telephone call | 197 | 28% |
| D. Other services on the | 144 | 20% |
| E. Price | 381 | 54% |
| F. Software libraries | 392 | 55% |
| G. Sysops | 151 | 21% |

Response: 607 out of 712 total visitors

The biggest winners here were the GENie libraries, which you find are bigger and easier to use, and the price. No answer scored less than 20%, which is great -- it means you care about all the things we also care about. For those people who picked CompuServe, the most common answer was D, other services on the system. Since we've added 45 new products to GENie in 1989 and have about the same number planned for 1990, we hope to see there be almost no reason to use another service. If we don't have what you're looking for, ask and we'll try to help.

Thanks again to all the survey participants, and have a great 1990.

---> Neil Harris @ GENie HQ

> OUTLINE ART CPU/STR Featureâ € ISD'S new, super offering....
=====

OUTLINE ART -> REAL MUSCLE
=====

CALAMUS - DTP

by R.F. Mariano

a brief overview, a full review is in the works...

ISD, the folks who bring you Calamus and DynaCadd are about to bring the competition to their knees with the imminent release of Outline Art. or O-Line for short. This is an art program which manipulates vector graphics thus producing stunning image and text special effects.

O-line uses vector co-ordinates to ascertain the position and outline of graphics created. Upon re-sizing the graphic, the outline vectors intelligibly expand relevant to each other, thereby preserving the resolution of the image. Using these vector co-ordinates, the attainable effects are beyond the imagination of most everyone, experienced or not. The algorithms needed to accomplish these feats are coded into the program thereby eliminating the use of many small utility programs that try to come close to the results O-Line produces.

Incidentally, since Calamus uses vectors to display the screen fonts, the enlargement of characters and their outlines remain perfectly smooth. Because Calamus can utilize vector or object oriented images, O-Line becomes a virtual powerhouse allowing you to import your designs into Calamus and produce absolute knockout results.

The entire process of creating an outstanding graphic representation in O-Line begins with the establishment of start points in say, making a custom logo for your company. After you have begun and have described these points, you'll be presented with a menu that handles the text input to the logo or whatever you are in the midst of creating. This menu allows the loading of fonts and the positioning and justification of the text. Additionally, this menu also permits the selection of greyscale and its intensity if you so wish to use it. Greyscales are a series of greys varying in intensity from almost black to almost white. When implemented, greyscale affords the user an opportunity to impart rather spectacular depth perception to the finished product.

With O-Line, dazzling three dimensional results are available through the combination of geometric shapes etc. and grey scaling. Full text flow is available to the user and coupled with the stretch and compress functions text can be made interestingly attractive and attention getting.

In closing, Calamus users note; O-Line is an absolute must have the results will by far, out weight your investment. The release of O-line and when combined with Calamus, will finally put to an end the question of whether or not the Atari DTP system is superior to DTP systems in use by other computers. It is light years ahead of these other systems.

For more Information, contact your dealer or;

ISD Marketing Inc.
P.O. Box 3070
Markham Industrial Park
Ontario, Canada L3R6G4
1-416-479-1880

> FTL Speaks Up CPU/STR OnLineâ € Candid Answers from FTL
=====

Ctsy GENie Atari RT

Sorry I've been offline for a while. Because of time constraints I can only log on about once a week.

- - -

Regarding Game Speed: The speed loss is due to the greater number of creatures in CSB. They each need CPU time to try and hunt you down.

- - -

Regarding Game Bugs: We'd like to hear from anyone with reports of a game bug. I don't handle these requests, but if you call Debbi Nelson at our office at (619) 453-5711 she'll take your information. It helps us to know your exact machine configuration (model, # of drives, RAM, accessories installed, etc.)

- - -

In the past, our most common problem has been damaged saved games. We have improved the error checking on CSB saved games, but, of course, nothing's perfect.

- - -

Regarding IBM DM: Yes, the rumors are true. Dungeon Master will soon be available for the IBM PC. However, I want to emphasize that it is not our intention to favor one machine over the other. We released CSB on the ST first as a special tribute to ST users, because we started on ST and ST users helped us grow and prosper. However, in the future our goal is simultaneous release across all formats we support. To support this goal we've been busy behind the scenes in 89. Last year we brought DM to Japan (just to help the trade deficit a little.) And, in Japanese! All coded in the good ole' USA on the three most popular Japanese PCs! One version was a full CD-ROM version with 16 bit CD music produced for a new Japanese computer called the "FM Towns." Look for this technology to migrate to our games in the USA.

- - -

Regarding Loading Speed: Yes, DM and CSB on the ST are probably the slowest loading games in history. We're sorry. But, it is a difficult problem because of the amount of data we try to cram on the disk. We use single sided disks because many ST users still have only single sided boot drives. This requires a lot of data compression which slows

down loading. I've heard a suggestion to allow installation to a hard disk. This is a good idea and we are considering how to do this in the future. We've avoided it in the past because TOS seemed to be in a state of flux. However, now things seem to be settling down.

- - -

Regarding Saved Game Uploading: I don't mean to make a big stink over this, but unfortunately there are more serious problems we face, such as piracy, that require us to protect our copyrights aggressively. If we allow some materials to be copied, but restrict others it could weaken our position with regard to piracy. The idea to separate user created data and copyright data is a good one. We just didn't consider it before, but I'll look into it.

However, we encourage you to upload Champion Portrait files which are your own creation. That was why we defined a separate portrait file type. If anyone is interested, we could publish the file format.

- - -

Regarding Game Suggestions: We are happy to have people write us with suggestions for future games. We read every letter we receive on the subject. In fact, we have a company bulletin board (near the refrigerator, which all the programmers frequent.) where we post the new letters. We're sorry that we can't reply more often, but please keep them coming!

- - -

Well, since Chaos is just out, I'm sure it is "Chaos" at FTL and they would probably appreciate letters more than phone calls, anyway, here is their address and phone number:

Software Heaven/FTL Games
6160 Lusk Blvd Suite 206
San Diego, Ca 92121
619) 453-5711

> "THE MOUSE" CPU/STR Reviewâ € Practical Solutions' Infrared beauty.
=====

"THE DAYS OF CLUMSY MOUSE CORDS ARE NUMBERED!!"

R.Mariano, STReport

Infrared.. the magic is known, Testy, short for Testarossa, as we call this tailless mouse, is the power behind one of the greatest new products for the user's comfort and ease of use. Practical Solutions has, without a doubt, arrived at the cutting edge of high technology with this exquisite mouse. One must use the mouse for a few short hours to feel it superbly smooth handling and sure footed performance.

Lets take a moment and talk about Practical Solutions, they have offered to the ST community many 'practical solutions' to otherwise P.I.A. problems confronting the user. For example, the mouse and joystick ports under the keyboard on the 520 & 1040 ST and STE machines, this has to be one of the greatest sources of aggravation to most every ST user. Practical Solutions provided the, now world famous, Mouse Master. Until the advent of the Multi-sync monitor, two separate monitors and of course, their connecting cables became another real P.I.A., until Practical Solutions came forward with the Monitor Master. Why are we talking about the well known products from P.S.? Easy answer... to give you an idea of how intense the service and dedication from Practical Solutions truly is. Knowing this, it becomes apparent to see why the users find it so easy to readily accept new products offered by them for use in the Atari computer userbase.

The 1990's promise to be the decade of sophisticated technology coupled with first class reliability. If the new Infrared mouse offered by Practical Solutions is any indication, we are in for some wonderful treats in the way of 'amazing hardware'. If you have any inclination to get a new mouse, don't hesitate about the wireless mouse from Practical Solutions.

"Using this mouse is like stepping from a Ford Escort
...into a full house Testarossa!"

To order your Cordless Mouse
or
obtain more information
CALL or WRITE

Practical Solutions Inc.
1135 N. Jones Blvd.
Tucson, Arizona 85716
1-602-322-6100

> GEMDOS NOTES CPU/STR Tech Notesâ € Good Info....
=====

CTSY USENET->FNET->CROSSNET

Article 5130 of comp.sys.atari.st:
>From: kbad@atari.UUCP (Ken Badertscher)
Subject: GEMDOS Extended Argument Spec (LONG)

GEMDOS EXTENDED ARGUMENT (ARGV) SPECIFICATION

Introduction

The Pexec() function of GEMDOS allows a program to pass to a child process a command line up to 125 characters long, with arguments separated by spaces. No provision is made in GEMDOS for the child to know its own name. This makes it difficult for C programs to correctly fill in argv[0], the standard place where a C program finds the command which invoked it. Because the command line arguments are separated by spaces, it is difficult to pass an argument with an embedded space. This document will specify a method of passing arguments which allows arbitrary argument length, embedded spaces, and support for argv[0].

Standard Argument Passing

The Pexec Cookbook specifies how to use Pexec() to launch a child process, passing a command tail (argument string) and an environment. Before getting into the extended argument scheme, let's review how arguments are normally passed to a child.

A parent process builds a command line into an argument string - a null terminated string whose first byte contains the length of the rest of the string - and its address is passed as one of the arguments to Pexec(). GEMDOS copies this argument string to the basepage which it creates for the child. Thus the parent is responsible for gathering all the child's arguments into one string. This is normally handled by a library exec() function. The child is responsible for parsing the string of space-separated arguments back into an array of strings. This parsing is normally handled by the child's startup code.

Evolution

Several methods of bypassing the limits imposed by Pexec() have been used by GEMDOS programs. Some allow a user to specify a file on the command line which contains the rest of the arguments. Others get a pointer to the arguments, or the arguments themselves, from the environment string. Most MS-DOS programs use a command file for the extra arguments. This can be inconvenient for a user, cluttering the file system with command files, and making the operation of batch files and makefiles more confusing.

Several "standards" have arisen on the ST which use the environment to pass arguments. While more convenient than command files, these standards have other problems. Some rely on sharing memory between parent and child processes. Some take advantage of undocumented features of the operating system to get argv[0]. Others give the child process no way to validate that the arguments it finds are intended for it.

Rationale

In order to pass more than the standard 125 characters worth of arguments to a child, or to let the child find its name, the parent must place the extra information in a place where the child can access it safely and legally. The most convenient place is in the child's environment string. An environment string is a series of null-terminated strings of the format "VARIABLE=value" (e.g. PATH=c:\bin,c:\etc, or ShellP=YES). The last null-terminated string in the environment is followed by a zero byte, thus two consecutive nulls indicates the end of the environment. The environment is allocated for the child by GEMDOS, it is owned by the child, and its contents can be specified by the parent.

The child must have some way of knowing that the arguments which it finds

in its environment are intended for it. The child may have been invoked by a parent which does not conform to this specification. Such a parent would leave `_its_` arguments in the environment, and could pass that environment on to the child. The child would mistakenly interpret its parent's arguments as its own.

Placing arguments in the environment passed to the child gets around all of the command line limits of the standard `Pexec()` command tail. Because there is no limit on the length of the environment, arbitrary length arguments are supported. Arguments placed in the environment are null terminated, so they may contain spaces. A parent can also place the name of the command with which it invokes the child in the child's environment, providing support for `argv[0]`. Validation of the extended arguments can be placed in the standard `Pexec()` command line, by assigning a special meaning to an invalid length byte.

The GEMDOS Extended Argument Specification

This specification uses the convention that the presence of an environment variable named `ARGV` (all upper case) indicates that extended arguments are being passed to the child in its environment. This means that `ARGV` is a "boolean" environment variable. For the purpose of this specification, its value is not significant, but its presence indicates that the strings following it are the arguments for the child. Implementations of this specification are free to give the `ARGV` environment variable any value. The `ARGV` environment variable must be the last one in the environment passed to the child, so that the child can truncate its environment at that point, and treat everything before the `ARGV` as environment, and everything after it as arguments.

The first argument to the child (`argv[0]`) is the first string in the environment after the `ARGV` variable. This argument is the "pathname" parameter passed by the parent to `Pexec()`. The remaining arguments are those that the child would normally find in the command tail in its basepage. Even if all of the arguments would normally fit in a child's command tail, the parent should set up the arguments in the environment to take advantage of the benefits of this extended argument scheme.

As many arguments as will fit in the command tail will be passed there as well as in the environment, to support non-conforming programs. As a flag that arguments are also in the environment, the length byte of the command tail will be 127 (hex 7f). Non-conforming programs should not have a problem with this length byte, because it is longer than the maximum 125 bytes allowed by `Pexec()`.

As an aside, the `Pexec Cookbook` erroneously implies that a command line can be 126 or 127 characters long. In fact, GEMDOS only copies to the child's basepage up to 125 bytes, or until it encounters a null, from the argument string passed to `Pexec()`. It ignores the length byte, placing a null at the same place it found one or at the 126th byte if no null is found. This has several implications: the length byte is not validated by GEMDOS (necessitating validation in the child's startup code, but also making this extended argument spec possible), and the null terminator `_can_` be located after the end of the real command tail (the Desktop places a CR character after the command tail and before the null). The `ARGSTART.S` startup code listing below demonstrates how to correctly validate and parse a GEMDOS command tail.

A child which finds an `ARGV` environment variable can use the command tail length byte value of 127 to validate that the arguments following the

variable are valid, and not just left over from a non-conforming parent which left its own ARGV arguments in the environment.

Because the strings in the environment following an ARGV variable are not environment variables, a child should truncate its own environment at the ARGV variable by changing the 'A' to a null.

Implementation: Parental Responsibilities

To pass arguments in the environment, a parent must create an environment string for the child. This can be achieved by first allocating as much space as is used in the parent's own environment, plus enough room for the ARGV variable and the arguments to the child, and then copying the parent's environment to the newly allocated area. Next, the ARGV variable must be appended, since it must be the last variable in the child's environment string. Following the ARGV variable is the null-terminated pathname of the child as passed to Pexec(), then the null-terminated arguments to the child, followed by a final null byte indicating the end of the environment.

After setting up the arguments in the environment, the parent must place as many arguments as it can fit in the command tail it passes to Pexec(). This way, a child which does not conform to this specification can still get arguments from the command tail in its basepage. When placing arguments in the environment, the parent must set the first (length) byte of the command tail to 127 (hex 7f), validating the arguments in the environment.

Here is an example `execv()` library routine in C. It uses three local utility routines, `e_strlen()`, `e_strcpy()`, and `str0cpy()` for getting environment size and copying strings into the environment created for the child.

```
/* EXECV.C - example execv() library routine
 * =====
 * 890910 kbad
 */

long Malloc( long nbytes );
long Pexec( short mode, char *filename, char *tail, char *env );
long Mfree( void *address );

/* Return the total length of the characters and null terminators in
 * an array of strings.
 * 'strings' is an array of pointers to strings, with a null pointer
 * as the last element.
 */
static long
e_strlen( char *strings[] )
{
    char *pstring;
    long length = 0;

    while( *strings != 0 ) {      /* Until reaching null pointer,      */
        pstring = *strings++;      /* get a string pointer,      */
        do {                      /* find the length of this string, */
            ++length;              /* using do-while to count the */
        } while( *pstring++ != 0 ); /* null terminator.      */
    }
}
```

```

        return length;          /* Return total length of all strings */
    }

/* Copy a string, including the null terminator, and return a pointer
 * to the end of the destination string.
 */
static char *
str0cpy( char *dest, char *source )
{
    do { /* use do-while to include null terminator */
        *dest++ = *source;
    } while( *source++ != 0 );
    return dest;
}

/* Copy an array of strings into an environment string, and return a
pointer
 * to the end of the environment string.
 * 'strings' is an array of pointers to strings with a null pointer
 * as the last element.
 * 'envstring' points to the environment string.
 */
static char *
e_strcpy( char *envstring, char *strings[] )
{
    while( *strings != 0 ) {
        envstring = str0cpy( envstring, *strings );
        ++strings;
    }
    return envstring;          /* Return end of environment string */
}

/* Run a program, passing it arguments according to the
 * GEMDOS Extended Argument Spec.
 *
 * 'childname' is the relative path\filename of the child to execute.
 * 'args' is an array of pointers to strings to be used as arguments
 * to the child. The last array element must be a null pointer.
 * 'environ' is a global array of pointers to strings
 * which make up the caller's environment.
 */
long
execv( char *childname, char *args[] )
{
    long    envsize, ret;
    char    *parg, *penvars, *childenv, *pchildenv;
    short    lentail;
    char    argch, tail[128], *ptail;
    static char argvar[] = "ARGV=";
    extern char *environ[];

/*
 * Find out how much memory we'll need for the child's environment
 */
    envsize = e_strlen( environ ); /* length of environment */
    envsize += e_strlen( args ); /* plus command tail args */
/* plus length of argv[0] */
    parg = childname;
    do { /* use do-while to include null terminator */

```

```

    ++envsize;
    } while( *parg++ != 0 );
/* plus length of ARGV environment variable and final null */
    envsize += 7;
    envsize += envsize & 1; /* even # of bytes */
/*
 * Allocate and fill in the child's environment
 */
    ret = Malloc( envsize );
    if( ret < 0 )
        return ret; /* Malloc error */
    childenv = (char *)ret;
    pchildenv = e_strcpy( childenv, environ ); /*      copy      caller
environment */
    pchildenv = str0cpy( pchildenv, argv ); /* append ARGV variable
*/
    pchildenv = str0cpy( pchildenv, childname ); /* append argv[0] */
    penvargs = pchildenv; /* save start of args */
    pchildenv = e_strcpy( pchildenv, args ); /* append args */
    *pchildenv = 0; /* terminate environment */
/* put as much in the command tail as will fit */
    lentail = 0;
    ptail = &tail[1];
    while( (lentail < 126) && (penvargs < pchildenv) ) {
        argch = *penvargs++;
        if( argch == 0 ) {
            *ptail++ = ' ';
        } else {
            *ptail++ = argch;
        }
    }
/* terminate command tail and validate ARGV */
    *ptail = 0;
    tail[0] = 127;
/*
 * Execute child, returning the return code from Pexec()
 */
    ret = Pexec( 0, childname, tail, childenv );
    Mfree( childenv );
    return ret;
}
/* End of execv() example code */

```

Implementation: Prenatal Responsibilities

A program's startup code must handle getting extended arguments out of the environment. The startup code should get the basepage pointer off the stack, then get the environment pointer from the basepage, and search the environment for "ARGV=". If "ARGV=" is found, the command line length byte in the basepage is checked. If the command line length byte is 127, then the arguments in the environment are valid. The first argument begins after the first null following the "ARGV=". It is important not to assume that the null follows immediately after the "ARGV=", because some implementations may assign a value to the ARGV environment variable. After setting up an array of pointers to the arguments, the startup code should set the 'A' of the "ARGV" variable to null, thus separating the environment from the argument strings (remember: a double null terminates the environment).

Here is some example C startup code which shows how a child could look for arguments in its environment:

```
* ARGSTART.S - example C startup code
* using GEMDOS Extended Argument Specification
* =====
* 890910 kbad

.globl      _main          ; external, C entry point
.globl      _argv0         ; external, name used for argv[0] if no ARGV
.globl      _stksize       ; external, size of application stack
.globl      _basepage     ; allocated here, -> program's basepage
.globl      _environ      ; allocated here, -> envp[]
.globl      _argvecs       ; allocated here, -> argv[]
.globl      _stklimit      ; allocated here, -> lower limit of stack
.BSS
_basepage:  ds.l 1
_environ:   ds.l 1
_argvecs:   ds.l 1
_stklimit:  ds.l 1
.TEXT
_start:
    move.l   4(sp),a5      ; get basepage
    move.l   a5,_basepage  ; save it
    move.l   24(a5),a0     ; bss base
    add.l    28(a5),a0     ; plus bss size = envp[] base
    move.l   a0,_environ   ; save start of envp[]
    move.l   a0,a1         ; start of env/arg vectors
    move.l   44(a5),a2     ; basepage environment pointer
    tst.b    (a2)          ; empty environment?
    beq.s    nargv         ; yes, no envp[]

    lea.l    (sp),a4       ; use dummy return pc on stack for ARGV test
* --- fill in the envp[] array
nxenv:      move.l   a2,(a1)+ ; envp[n]
            move.l   a2,a3
nxen1:      tst.b    (a2)+
            bne.s    nxen1   ; get the end of this variable
            tst.b    (a2)    ; end of env?
            beq.s    xenv
* --- check for ARGV
            move.b    (a3)+,-(a4) ; get 1st 4 bytes of this var
            move.b    (a3)+,-(a4)
            move.b    (a3)+,-(a4)
            move.b    (a3)+,-(a4)
            cmp.l     #'VGRA',(a4)+ ; is it ARGV?
            bne.s     nxenv
            cmp.b     #'=',(a3) ; is it ARGV=?
            bne.s     nxenv
            clr.b     -4(a3)      ; ARGV marks the end of our environment
            cmp.b     #127,$80(a5) ; command line validation?
            bne.s     nargv      ; nope... and we're done with the env.
* --- got an ARGV=, create argv[] array
            clr.l     (a1)+      ; terminate envp[]
            move.l     a1,_argvecs ; save base of argv[]
nxarg:      move.l     a2,(a1)+ ; argv[n]
nxar1:      tst.b     (a2)+
            bne.s     nxar1
            tst.b     (a2)
            bne.s     nxarg
```

```

* --- end of environment
xenv:    move.l    _argvecs,d0    ; if we got an argv[]
        bne.s     argok          ; don't parse command tail
* --- No ARGV, parse the command tail
* NOTE: This code parses the command tail IN PLACE. This can cause
problems
*       because the default DTA set up by GEMDOS for a program is located
*       in the command tail part of the basepage. You should use
Fsetdta()
*       to set up your own DTA before performing any operations which
could
*       use the DTA if you want to preserve the arguments in the command
tail.
nargv:   clr.l     (a1)+          ; terminate envp[]
        move.l    a1,_argvecs    ; base of argv[]
        move.l    #_argv0,(a1)+ ; default name for argv[0]
        lea 128(a5),a2          ; command tail
        move.b     (a2)+,d2      ; length byte
        ext d2
        moveq      #125,d1       ; validate length
        cmp d1,d2
        bcs.s      valen
        move d1,d2              ; if invalid length, copy all of tail
valen:   clr.b      0(a2,d2)     ; null tail because desktop inserts <cr>
        moveq      #' ',d1      ; space terminator
get1:    move.b     (a2)+,d2      ; null byte?
        beq.s      argok        ; if so, we're done
        cmp.b      d1,d2        ; strip leading spaces
        beq.s      get1
        subq #1,a2              ; unstrip start char
        move.l     a2,(a1)+     ; and store that arg
get2:    move.b     (a2)+,d2      ; next char
        beq.s      argok        ; if null, we're done
        cmp.b      d1,d2        ; if not space...
        bne.s      get2         ; keep looking
        clr.b      -1(a2)       ; terminate argv[argc] in the command tail
        bra.s      get1         ; get next arg
argok:   clr.l     (a1)+          ; terminate argv[]
* --- allocate stack
        move.l     a1,_stklimit  ; end of env/arg vectors is stack limit
        add.l      _stksize,a1   ; allocate _stksize bytes of stack
        move.l     a1,sp         ; set initial stack pointer
* --- release unused memory
        sub.l      a5,a1         ; size to keep
        move.l     a1,-(sp)
        move.l     a5,-(sp)      ; base of block to shrink
        pea $4a0000             ; Mshrink fn code + junk word of 0
        trap #1
        lea 12(sp),sp ; pop args
*
* Everything beyond here depends on implementation.
* At this point, _environ points to envp[], _argvecs points to argv[],
* and _stklimit points to the end of the argv array. Thus argc can
* be calculated as ((_stklimit-_argvecs)/4)-1.
* _main could be invoked as follows:
*
        move.l     a5,-(sp)      ; basepage
        move.l     _environ,-(sp) ; envp[]
        move.l     _argvecs,-(sp) ; argv[]
        move.l     _stklimit,d0  ; 4 bytes past end of argv[]

```

```

sub.l      (sp),d0          ; (argc+1) * sizeof( char * )
asr.l      #2,d0           ; argc+1
subq #1,d0                ; argc
move d0,-(sp)
jsr  _main                ; call mainline
lea  14(sp),sp ; pop args

```

A Final Note

This specification was formulated with careful deliberation, and with input from several companies and developers who have created development tools for GEMDOS. The Mark Williams extended argument passing scheme was the main influence for this specification, because it has been in use, and supported by Mark Williams and other companies for several years. This specification is very similar to the Mark Williams scheme, with the following important exceptions:

1) Under the specification, the arguments after the ARGV environment variable may be validated by checking the command tail length byte. The Mark Williams `execve()` library function uses the command tail length byte as a telltale, but it is not checked by the `crt0` startup code. This validation is important for the reasons mentioned in the Rationale section above.

2) The specification allows the ARGV environment variable to take on any value. Mark Williams uses the value of ARGV as an iovec, which is described in the Mark Williams documentation. The iovec should no longer be needed, as its primary purpose was to simplify the MWC implementation of the C library function `isatty()`.

3) Some versions of the MWC startup code do not require the ARGV= to have an '='. Because ARGV is an actual environment variable in the specification, the equals character is required.

```

--
||| Ken Badertscher (ames!atari!kbad)
||| Atari R&D System Software Engine
/ | \ #include <disclaimer>

```

Editor Note:

Why must this highly informative material come to everyone through such an involved path? (UseNet -> FNET -> CrossNet) The MAJOR services reach many more users and developers than FNET or USENET can hope to reach. Is it because the major services are NOT looked upon as being a REAL vehicle to deliver this data to the userbase? Surely this will be rectified and this type of information will become available to all services. After all, we all KNOW Atari is not desirous to offend any users.....

=====

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NewsBytes News Service

by Steve Gold

PC DITTO II, MS-DOS FOR THE ATARI ST, SHIPS

JACKSONVILLE, FLORIDA, U.S.A., 1990 JAN 06 (NB) -- Avant Garde, the Florida-based ST hardware and software systems specialist, has begun shipping PC Ditto II, a hardware version of its software package that allows the Atari ST to emulate a PC running under MS-DOS.

PC-Ditto II costs \$299-95, according to William Teal, a partner in Avant Garde, and is capable of running most IBM PC software to PC-AT speed standards, on all Atari ST and Mega ST models. The product's processor - PC Ditto I - completed the same function under software, but only to PC-XT speeds. Avant Garde claims that PC Ditto II has a Norton SI rating of 3.0, which compares with an IBM PC-XT rating of 1.0, the IBM PS/2 Model 30 rating of 1.8 and a Zenith EZ-20 rating of 2.6.

Teal said that PC Ditto II will appeal to existing users of the Atari ST series as a utility. "Many people purchase the Atari ST for features inherent in it. Yet, they also desire access to that large base of IBM software," he said. "Many of our buyers (of PC Ditto I) are people that like to take work home, but don't want to spend exorbitant sums of money on a PC compatible. Other consumers are small businesses that cannot afford and do not need more expensive computers. Both of these groups require a product that is very compatible, fast and also inexpensive. PC Ditto II fulfills that need," he added.

Teal went on to say that PC Ditto II was developed after all the bugs were ironed out of PC Ditto I. PC Ditto I was a software only emulation, whereas PC Ditto II is a hardware-based package, allowing advances in PC emulation speed to be made, whilst still taking advantage of the ST's processing power.

PC Ditto I, the software-only PC emulation package on the ST, continues to retail for \$89-95. Registered owners of PC Ditto I can obtain a \$150 discount voucher towards the purchase of PC Ditto II.

(Steve Gold/19900106/Press & Public Contact: Avant Garde Systems - Tel: 904/221-2904)

-----***-----

Editor Note:

Presented above is the Good News.... We showed that to allow all to see most of us were overjoyed to see the new emulator was finally shipping.

Below, we present a smattering of the "proverbial act of hitting the fan".

A.KLYM posts:

In my prior message I said that I would not try to install my PC-DITTO II until this weekend. However, I found that I couldn't wait. I own an old 520 ST with an AERCO EasieST memory upgrade. I can't find any way that I can fit my PC-DITTO II into my machine. The board and the connecting ribbons are just too big. I am giving up for tonight. The only hope I have is to take it all to the local store which used to sell the ST and see if they can build up my case or build some sort of jerry-rigged expansion box. I am very disappointed. Avant-Garde, please let us know what the explanation is for this problem. Will you have a different board for those of us who own old 520ST models? Is there some alternative way to install PC-DITTO II in our machines?

J.KARP posts:

I have the same problem exactly with my newly installed PCDITTO II as ELROD [Rick] above. I am stymied as have checked all of the connections a dozen plus times... Also, no diagnostic program (as mentioned in the manual) was included on the disk, so I don't know at to try next. Are you listening Bill (Teal)? HELP!! Also, some users have mentioned a problem with the size of the board... well my 1040 has the 68000 under the keyboard, and even the clip won't fit inside the RF shield, never mind the main board. Anyway, I cut a slot in the vents in the bottom of my case, and ran the cables into a little box (the low profile metal box at Radio Shack is the perfect size for the board. The connections all seemed simple, so why doesn't it work???)

Here; we present the replies sent to users experiencing one problem or another...

AVANTGARDE posts;

ELROD

We have found that the lockups occur mostly due to poor connections. Please recheck them (you may ultimately have to have them soldered, if your 68000 is oxidized).

AVANTGARDE posts;

A.KLYM

Sounds like there is too much machinery under the hood. Please check with your dealer and see what he says (I would have to see your machine to give you a clear answer.). pc-ditto II fits in the 520 (old model) with room to spare.

AVANTGARDE posts;

J.KARP

Have you checked the connections. That is where we have found the problems to lie in other units? Also, the board should fit between the power supply and disk drive in the 1040, and the cables are long enough to allow the clip to attach to a 68000 under the keyboard. Which REV motherboard does your 1040 have?

Thanks!

EDITOR NOTE:

At this point in time, we wish to submit that we have interviewed a number of recent recipients of the new Ditto II package, and it now appears that only those with revision 3 of the 1040 motherboard are having little or no difficulty. We advise those of you who are having difficulty please correspond with AG forthwith and bring your system configuration to their attention.

The bottom line here is we are seriously concerned that AG, when designing PC Ditto II, did not pay closer attention to the strong possibilities that ST'ers would already have a multitude of goodies installed. A 5 INCH BY 7 INCH PRINTED CIRCUIT BOARD IS RATHER ON THE LARGE SIDE AND COULD EASILY CONFLICT WITH OTHER ADD-ONS. (memory, etc.)

We are confident that AG will come up with an in-the-field fix, for everyone, in the meantime, the official stance is the PCB was designed with the revision 3 1040 motherboard in mind. Hmmm where, does that leave the mega owners and especially those with the Moniterm board, Math Co-pro and T16 already installed? Must these goodies be done away with? Also, a number of folks have complained about the diagnostics spoken of in the manual not being present on the disk. Regretfully, we find that getting through to AG is "MISSION IMPOSSIBLE", all we can say is keep trying. If the answering machine is at work.... don't give up hope.....

In recent posts, AG has stated the press would receive the review units first.... well, STR is proud to say we are among those who are still waiting.... and paid the coupon price of \$150.00, speaking of which, we now formally request a refund of same.

> STACEY, A Tale CPU/STR Featureâ € Stacey, a Princess from Nod.
=====

STACEY, A PRINCESS FROM NOD
=====

by C. Medley

The following is a fairy tale.
The characters do not exist and bear no resemblance to real people. At least, I hope they don't!

This story begins in the land of Nod.

Nod is ruled by a young princess whose name is ...Stacey.

Stacey loved computers. She used a mammoth machine with based on transistors reminiscent of ENIAC during the 60's. However, she also yearned to have the freedom to go wherever she wanted and still enjoy her wonderful computer. However, one day, from a land beyond "where the sun sets", a man came to the kingdom, seeking an audience with the royalty of Nod. Repeatedly, both the people of Nod and Stacey's advisors rebuked him as nothing more than a "common peddler".

Soon, the "common peddler" found out that the young princess sought a computer. He felt that he could gain great wealth and influence in Nod if he could make such a machine, much like ENIAC, but portable. But he also knew that he would have to face the dread forces of the FCC, the one unstoppable force that he would have to appease before attempting to make his "portable computer".

So he labored away, hour after hour, attempting to conform carefully to the ideal of the "portable computer" that Stacey wanted. When he was done, he went to the great temple of the imperious High Lord elder, and told him to examine his work for flaws. He knew that if the High Lord found fault in his workmanship, the FCC would never let him show it to Stacey.

As he approached the altar, he placed his computer on it and waited for the High Lord. The High Lord then entered the temple and examined the computer. He deemed it to be worthy for use by a blacksmith or a minstrel, but not good enough, even for a commoner. Thinking to himself of how he could make the most of the situation, the "common peddler" began to scheme. He figured that the princess Stacey would be pleased to buy his "portable computer" under the auspices of being a minstrel, and then grant him great wealth and influence.

So he snuck into Castle Nod, and left a note for Stacey telling her of his wondrous invention and how she may acquire it by posing as a simple minstrel. When Stacey awoke, he was sure she would see his letter. And when she read it, it was a certainty it would please her, and that she would be grateful to him and grant him the very wealth and influence he sought...

However, that very night, the brooding forces of the FCC gathered. They set the standards for what was permissible as a computer in the land of Nod. And they had contacted the High Lord about this "common peddler". In their omniscient ways, they knew of his limited approval of the "portable computer" but also knew that the manure peddler's intents, in the case of Stacey, were not to make an industrial device. Verily, they had deduced it was a computer and had to conform to very stringent requirements, especially if it was to be portable. They decided they had to inform the peddler that he could not sell his portable computer to anyone, despite the limited approval of the High Lord.

Meanwhile, at his humble abode, the peddler was sleeping soundly, dreaming of all the wealth and influence he would gain the next day.... but suddenly, his dream was interrupted and he awoke to see the face of the High Lord before him as he lay on his bed.

"You must not tell the people of Nod that you can give them this machine, wonderful though it may be! It does not conform to what the

all-knowing, all-seeing, FCC mandates! Verily, yours is not an industrial device, and it certainly would be good for minstrels and blacksmiths, however, it must ONLY operate when attached to the industrial tools of either trade!"

"But, I have already told the princess of this portable computer, and of how she can acquire one by posing as a minstrel! What am I to do?" But the High Lord answered him not, and he left the manure peddler to contemplate the error of his ways.

As the sun rose to herald the coming of a new day, the princess awoke from her slumber. Examining her table, she saw the carefully scripted note, left by the manure peddler. Upon reading it, she was so excited, she immediately dressed up and prepared for the journey to the "Minstrel Instrument Store", where she should be able to get this wonderful portable computer.

But, alas, when she arrived, there was neither hide nor hair of it. She asked the proprietor of the store about it, and he lowered his voice to a whisper and said: "Ah yes, milady... there was talk of such a machine, and verily, 'twould be a wonderful tool for the minstrel. But such a machine would be able to work in its own right, not just as a part in a very large machine. And therein is the problem.... I hear tales that the forces of the FCC approved it for the very purposes for which it cannot be used!"

"But what will I do? I grow weary of being bound to my home when I wish to use my computer!"

"All we can do is wait... and hope"

> Stock Market ~ CPU NewsWireâ €
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THE TICKERTAPE
=====

by Michael Arthur

Concept by Glenn Gorman

Stocks were not traded on New Year's Day. Atari Stock went down 1/8 of a point on Tuesday, and was down 3/8 of a point on Wednesday. On Thursday, it went up 3/8 of a point, and went up 3/4 of a point on Friday. Finishing up the week at 9 1/4 points, Atari stock is up 5/8 of a point from the last report.

Apple Stock is up 2 1/2 points from Friday, Dec. 29, 1989.
Commodore Stock is down 1 point from 12/29/89.

IBM Stock is up 5 5/8 points from 12/29/89.

Stock Report for Week of 1/02/90 to 1/05/90

STock Reprt	New Year's Day	Tuesday		Wednesday		Thursday		Friday	
		Last	Chg.	Last	Chg.	Last	Chg.	Last	Chg.
Atari	-----	8 1/2	- 1/8	8 1/8	- 3/8	8 1/2	+ 3/8	9 1/4	+ 3/4
								96,800 Sls	
CBM	-----	10 5/8	- 1/8	10 3/8	- 1/4	10	- 3/8	9 3/4	- 1/4
								64,100 Sls	
Apple	-----	37 1/4	+ 2	37 1/2	+ 1/4	37 5/8	+1/8	37 3/4	+ 1/8
								1,107,200 Sls	
IBM	-----	98	+ 3 7/8	98 7/8	+ 7/8	100	+1 1/8	99 3/4	- 1/4
								1,890,500 Sls	

'Sls' refers to the # of stock shares that were traded that day.

'CBM' refers to Commodore Corporation.

> AUA NewsNotes CPU/STR InfoFileâ ¢ Keeping up to date...
=====

AUA NEWSLINE
=====

by D.C. Signorini

My apologies to everyone expecting my articles in the last two issue's of this journal. It appears that Ralph and I were having a data communication problem that left my articles on Ralph's doorstep unreadable. I believe that we have worked this minor technical difficulty out and you will be reading my articles once a week. Ah, the perils of modern communication technology and the never ending quest for a reliable means of file compression and transfer. So, better late than never, on with the 1990 show.

All of us make a new year's resolution or two. Some of us keep that resolution while others let theirs dwindle away into "what I should have done this year." My resolution (one of them) for the new year is to give 100% to the AUA and getting this monstrosity of a project underway and supported by thousands of ST users. It is not an easy job. I am sure

that Robert Guadagno will agree with me on that! However, there are several people in the Atari Elite organization and a few people in the software industry who have pledged their hard work and support to the AUA. Without them, and your support, the AUA would not survive!

If you missed my first article in STReport, I encourage you to get it and read it. In that issue I explained a little of what happened to the AUA in the later half of 1989 and informed the community of my goals for the AUA in 1990. Instead of repeating all of that in this article, I ask that you get issue number 118 and read it!

Well, in the past few weeks, along with celebrating Christmas and getting ready for my first annual New Year's Eve Bash at my house, I was able to square away and iron down a few details of AUA membership. You will find below a list of benefits and a membership application. As I mentioned in my previous column, the AUA is FREE to every Atari user. However, the Atari Elite and myself were able to negotiate 2 other benefits packages that I believe will be likewise attractive to all of you. Remember, you do not have to pay a penny to be a member of the AUA and have a voice in the ST community. However, if you want to receive the Atari Elite newsletter, the Electronic Chronicles (see below), or the AUA Newsletter published 4 times a year, then you will have to select one of the other packages depending on your needs and wants. Please remember also that the Atari Elite is a non-profit organization and that the dues that you send in are only to cover the costs of mailings, disk duplication, disk cost and publishing fees. I wish that I could offer the AUA membership free newsletters, but at this time, that is not feasible. At any rate, the packages requiring payment are not too damaging on the pocket book, especially if you consider what you are getting in return for your dues.

As for the people who have already sent in applications in early 1989. I have not yet at this time developed a plan for you. At this time, all of you are on the AUA membership list under the free package indicated below. Your membership will expire in May of this year, and if you wish to continue your free AUA membership for one more year, then you must submit a new application. So, if you will take the time to do that, I will extend your membership NOW for the membership year ending May, 1991. If you plan on selecting one of the other pay packages then I encourage you to do so now. Again, if your name appears on my database as a AUA member from 1989, you will be given either an extended paid membership for 14 months or something equally attractive to you. The board of directors of the Atari Elite has promised me that those people who have already sent in their applications prior to 1990 will be "taken care of." I also ask that if you have had a change of address in the past year to fill out a new application and send it to me so that I can make the change in the database so that we can contact you.

This week I had the opportunity to speak with the people at Microtyme Computers in Kettering, Ohio. In the last issue we learned that STR awarded Microtyme the Golden Fuji Award for excellence in support for the Atari ST computers. Before reading that particular article by Ralph, you could have called me and asked me who I thought was the best all around dealer/distributor for Atari products and I too would have said Microtyme. I have dealt with Microtyme on a personal and business level for almost 4 years now and I can honestly say that I have never had a single complaint with the way they handle orders, their service, or their overall knowledge of the Atari ST market place. I have trusted Microtyme and I turn to them for all of my personal and business needs and I am always quick to recommend Microtyme to anyone who needs

anything for their ST.

As you may already know, from my past few articles, I have been in contact with several dealers about support for the AUA. Out of the 6 or 7 that I contacted, Microtyme has been the most cooperative and are willing to go the extra mile to help support the AUA. This I knew they would do, but I had to check with other dealers to make sure that I would not be stepping on any toes as is very important when you want to form a national organization and will be pointing potential sales in one direction or another. As I said, John at Microtyme, was very enthusiastic about the AUA and has agreed to work with me on discounts and mass purchases. So, as my first official announcement for the AUA, Microtyme computers will be an Official Supplier of the Atari User's Organization. I hope that we will bring added business to Microtyme over the course of the year, and I hope that you will also extend added support to their fine operation. The address and telephone number of Microtyme is:

MicroTyme
4049-51 Marshall Road
Kettering, OH 45429
1-800-255-5835

When I am able to work out more details of support from Microtyme, I will certainly pass this information on to you. One thing that I want to stress. I am not attempting to remove support from your local dealers. By all means, support them first. But, if for any reason you can not find what you are looking for, then give Microtyme a call. I am also aware that many areas in the country do not have a local dealer. In this case, you will receive the service you want and expect from Microtyme. Give them the support they deserve. Congratulations to Microtyme and I hope that their extraordinary support for the ST community will continue long into this decade.

On to business. The response to the re-structuring of the AUA throughout the community has been very positive. I have received several phone calls from people offering their help in getting the AUA back on its feet and many have given me much needed encouragement and support. Keep the calls and letters coming in as your requests and suggestions are always welcome. Remember, the AUA is YOUR organization. I would also like to thank Jon Clarke from Auckland, New Zealand for his support and for his help in spreading the word of the AUA down under. He will be helping me contact several user groups in his country as well as a few in Europe. I am very optimistic that the AUA will be very welcomed in countries abroad. Thanks again, Jon, for your enthusiastic support!!

I still have a great deal of work to do for the AUA. I do not want to rush things and have everything tumble down as they did this past summer. I want to build a concrete structure for the AUA so that the organization will endure all the bad storms and will prosper from all of the great opportunities. So, please do not expect immediate results. Things like this take a great deal of time. My major concern is getting people to join. Once we get an idea of how much support we have, we can begin to offer more to the userbase. So, take the time and fill out the AUA application. Membership to the AUA is FREE! You can join for the price of a stamp. If however, you find the other 2 pay packages more attractive, then I encourage you to contribute and join the AUA.

----- Clip Here -----

Mail to: The Atari User's Association
C/O The Atari Elite, Inc.
P.O. Box 18293
Pittsburgh, PA 15236

=====
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> POINT/COUNTERPOINT? CPU/STR OnLineâ ¢
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CTSY GENIE ATARI RT

Category 14, Topic 40
Message 203 Tue Jan 09, 1990
J.Allen at 00:08 EST

After looking at the last 4 years I have to say Atari should be brought before congress as an example of how American companies are so screwed up. Atari should be held high as an example of how NOT to do this and that. From both a marketing AND a manufacturing point it is inconceivable that so many versions of the STE can exist. You put the SIMM sockets in for what purpose? A user to upgrade? Well all I can say is things are financially tough enough for the company, to go and have to stock 4 versions of the SAME machine, differentiated by pluggable memory only, and having to correctly forecast demand for each iteration is absolutely INSANE! That's like Apple having a "line" of plus's, the PLUS-1, PLUS-2, and PLUS-4. Obviously Apple isn't quite THAT stupid, they sell the memory "on the side" and they price it too high because they DON'T want to be in the memory business...too unstable. When is Wall Street going to give Atari the "corporate slap-upside-the-head"?

And the issue of no 520s in the warehouse, I used to have two dealers in the area but they just couldn't seem to get product. Maybe they weren't paying their bills, either way, the lack of deliveries toasted them, so now in the middle of a special...the \$399.95 520 we find that dealers can't get any product. Guys the idea of having a special is to sell product, not to say we have a special. A special isn't particularly special without product to sell for the "special" price :-)

Category 14, Topic 40
Message 205 Tue Jan 09, 1990
TOWNS at 01:23 EST

Once again, Jim.. you amaze me with your overwhelming attitude. It makes me never want to call GENie again. Hmm, now there's an idea..

On a serious note for the rest of the crowd.. What is wrong with Atari making STE machines with different memory sizes? We buy memory in large quantities and probably can buy it cheaper than most people could on the street. What is wrong with us offering a machine with the appropriate amount of money? Maybe we can offer a 2 meg machine for less money than it would cost to buy the 520 version and upgrade it to 2 megs! Not to mention those people out there who are using a computer for a specific task and don't want to be bothered with SIMMS or memory upgrades, but just want to buy the computer and use it..

-- John

Editor Note:

Having been known for being 'outspoken' in the past, I find myself hard pressed to not agree with J. Allen in this commentary, Allen correctly points out one of the MAJOR marketing faults of Atari. As a result, he is unduly chastised and a foolhardy attempt is made at making him appear less informed than he is. John, you blew it on this one.. marketing is obviously not your forte....

The bottom line is simple, .. the userbase is very interested in a number of memory configurations, of this there is no doubt. Let the dealers/users perform their own memory upgrades. That is the common sense way to accomplish the job. Furthermore, the STE should, without a doubt be offered in the Mega Style, two piece cabinet, the majority of users have already expressed a strong desire for such a choice yet all the input seems to fall upon deaf or worse, smug, know-it-all ears. It is time Atari began to listen to the the guys paying the bills, you know, the folks who down in their pockets and peel off the cold, hard earned, cash.

Folks, we would like to hear concerning this matter and any other suggestions you may have for Atari. Especially concerning the future and the new cabinet design (wedding cake) for the TT and its non swivel monitor.

> CPU NEWSWIRE CONFIDENTIALâ € Sayin' it like it is.....
=====

When is the STE going ON SALE IN THE STATES? Remember a certain online conference where our 'fearless leader' said we will release and sell in the States first? HMMMM Canadian dealers HAVE the STE and its on sale all over EUROPE!! It AIN'T available in the States. The FCC is being blamed for this, something about a small added shield being needed. Atari, when in heaven's name are you going to begin listening to those who care the most about the future of the company? In regard to the STE, many voices have already been heard BEGGING for the STE design to appear in a Mega style case, and with 1mb of simm ram thus allowing the dealers to upgrade the machines to meet the memory requirements needed by the prospective purchaser. Additionally, there have been good suggestions made that approach sanity in customer support, increased sales, profits for Atari and joy for the ST owners. IE; Manufacture and market a cable, much like the one that is supplied with the Mega, that would allow the Mega keyboard to be used with ALL ST computers.

- Albany, N.Y.

***** LS74 MOD FINALLY DETAILED! *****

Early T16 units came with a 74LS74 that is supposed to be piggy backed to the 74LS32 (U78) on the Megas. It is supposed to be a fix that even Atari puts into their computers now. Here's what you do:

1. Bend up all the pins on the 74LS74 except pins 7 and 14.
2. Cut the trace on the bottom of the motherboard that goes from pin 12 of the 68000 to pin 12 of the expansion port.
3. Solder pin 7 of the 74LS74 to pin 7 of the 74LS32 (U78) and solder pin 14 of the 74LS74 to pin 14 of the 74LS32 (U78).
4. Using wire wrap wire, connect pin 2 of 74LS74 to expansion port pin 12.
5. Connect pin 3 of 74LS74 to pin 15 of the 68000.
6. Connect pin 4 of 74LS74 to pin 18 of the 68000.
7. Connect pin 5 of 74LS74 to pin 12 of the 68000.
8. All pins that don't make connections anywhere can be cut or left bent up (as long as it isn't touching anything).

Atari does this to some of the later Megas that came out. Some however have a similar upgrade with the 74LS74 soldered on top of the 68000 which would have to come off when installing an accelerator. This fix works well with Blitters that are on National Semiconductor chips and SGS-Thompson chips. From what I've heard, there are some real problems with STs that have the Blitters by GE-RCA chips... Hope this little hack can solve your problem with random dots on the screen and crashes.

- Sunnyvale, CA.

***** EVERYBODY OUTTA THE POOL! *****

The POOLFIX.PRG program that was uploaded recently has some problems. It shouldn't cause any damage, but most of the time it will crash your machine. We are working on a corrected version of this program and should have it available soon. Please discontinue use and delete any copies you have of the current POOLFIX.PRG.

We apologize for any problems this may have caused you. We will have an updated version in the next day or two.

-- John Townsend
Atari Corp.

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